

In the Claims:

Please amend the claims as follows:

1. (Currently amended) A storage management service system, comprising:
a storage on demand (SoD) center system ~~computer~~;
a storage subsystem including a plurality of storage devices and a plurality of I/O
ports; and

a host computer coupled to, ~~said host computer~~, said storage subsystem, and and
to said SoD center system ~~computer~~ interconnected by a communications network; ~~said host~~
~~computer comprising a software agent, said software agent providing an interface between said~~
~~SoD center system computer and an operating system resident on said host computer~~; and
wherein

said SoD center system ~~computer~~ receives input of an SoD demand, said SoD
demand including a request to specify a storage resource, sends said demand to ~~an SoD resource~~
~~manager, which manages storage resources of said storage subsystem~~; and wherein said SoD
~~resource manager~~ storage subsystem receives said demand ~~from said SoD center system~~
~~computer~~, makes said storage resource usable, and ~~thereupon updates a device management table~~
~~and an I/O port management table, in which a current status of at least one of a plurality of~~
~~resources is recorded, and to which said SoD resource manager refers when managing said at~~
~~least one of a plurality of resources~~, and sends a management result to the SoD center system
computer; and wherein

~~said SoD center system computer receives said management result from said SoD~~
~~resource manager, and thereupon stores said management result.~~

2. (Currently amended) The system of claim 1, wherein if said ~~demand~~
~~requires request includes~~ an I/O path setting to be updated, said SoD center system ~~computer~~
sends an I/O path setting request to ~~said software agent running in said host computer~~; and
wherein said host computer ~~software agent receives said I/O path setting request from said SoD~~
~~center system computer, and thereupon requests said an operating system to update an I/O path~~
~~setting table based upon said I/O path setting request, and receives an update result from said~~

operating system, and ~~thereupon~~ sends a setting result to said SoD center system ~~computer~~, and wherein said SoD center system ~~computer receives said setting result from said software agent,~~ and ~~thereupon stores said setting result.~~

3. (Currently amended) The system of claim 1, wherein said host computer and said storage subsystem are coupled ~~connected directly~~ by physical and logical connections ~~made~~ between at least one of a plurality of host I/O controllers and at least one of a plurality of subsystem I/O ports.

4. (Currently amended) The system of claim 1, wherein said host computer and said storage subsystem are coupled ~~connected~~ by a network switch between at least one of a plurality of host I/O controllers and at least one of a plurality of subsystem I/O ports.

5. (Original) The system of claim 4, wherein said network switch comprises a fibre channel network switch.

6. (Currently amended) A storage apparatus comprising:
~~a~~ memory;
~~at least one of a plurality of~~ storage devices ~~that store information;~~
~~at least one of a plurality of~~ I/O ports providing an interface to said ~~at least one of~~
a plurality of storage devices ~~that store information;~~

a device management store table, in which a status of said ~~at least one of a~~
plurality of storage devices ~~that store information~~ is stored, and an I/O port management store
table, in which a status of said ~~at least one of a~~ plurality of I/O ports is stored, ~~said device~~
~~management table and said I/O port management table being disposed in said memory;~~ and

a storage resource management processor; wherein
said storage management processor receives a demand for storage resources, the
demand specifying one of said storage devices, and ~~thereupon~~ updates said device management
store table and said I/O port management store table, and sends a management result responsive
to said demand ~~for storage resources;~~ and wherein updates to at least one of a plurality of paths

connecting to storage resources allocated from ~~said~~ at least one of ~~a~~ said plurality of storage devices ~~that store information~~ are automatically defined to an operating system of a user machine ~~by a remotable software agent~~.

7. (Currently amended) The apparatus of claim 6, ~~said at least one of a~~ plurality of storage devices ~~that store information~~ comprising at least one of a magnetic disk, an optical disk, a magnetic-optical disk, and ~~a~~ semiconductor memory.

8. (Original) The apparatus of claim 6, further comprising a communications interface to a network, said storage management processor receiving said demand for storage resources over said network.

9. (Original) The apparatus of claim 6, further comprising a fibre channel switch, said fibre channel switch providing capability to connect to at least one of a plurality of host computers.

10. (Currently amended) A method for configuring a host ~~computer~~ to access resources in a ~~remotable~~ storage subsystem, said host ~~computer~~, said ~~remotable~~ storage subsystem, and a center system ~~computer~~ interconnected by a communication network, said method comprising:

receiving at said host ~~computer~~ an I/O path setting request from said center system ~~computer~~, said I/O path setting request specifying a path to a resource comprising information about resources in said ~~remotable~~ storage subsystem allocated for use by said host ~~computer~~;

requesting an operating system resident in said host ~~computer~~ to update an I/O path setting ~~table~~ based upon said I/O path setting request;

receiving an update result from said operating system; and

sending a setting result to said center system ~~computer~~ based upon said update result.

11. (Currently amended) The method of claim 10, wherein updating said I/O path setting ~~table~~ comprises: storing an indication that a particular I/O port in said storage subsystem is accessible to a particular host I/O controller.

12. (Currently amended) The method of claim 10, further comprising:
receiving at said center system ~~computer~~ an input of a demand for storage resources;
determining whether sufficient resources exist ~~in order~~ to meet said demand;
sending said demand for storage resources to said storage subsystem, if sufficient resources were determined to exist;
receiving from said storage subsystem a management result, said management result indicating whether storage resources have been successfully allocated in accordance with said demand;
storing said management result;
determining whether said demand includes an I/O path setting request;
sending said I/O path setting request to said host ~~computer~~, if said demand included an I/O path setting request;
receiving said setting result from said host ~~computer~~; and
storing said setting result.

13. (Currently amended) The method of claim 12, further comprising:
receiving said demand for storage resources at said storage subsystem;
determining whether said demand includes a command to make at least one of a plurality of installed devices available;
updating a device management store table, if said demand includes a command to make at least one of a plurality of installed devices available;
updating an I/O port management store table; and
sending a resource management result to said center ~~computer~~ system.

14. (Currently amended) The method of claim 13, wherein updating a device management store table comprises: storing an indication that a particular device is usable.

15. (Currently amended) The method of claim 13, wherein updating a I/O port management store table comprises: storing an indication that a particular I/O port is usable.

16. (Currently amended) The method of claim 13, further comprising:
receiving at said storage subsystem an I/O command to access storage resources from said host ~~computer~~;
determining whether storage resources requested by said I/O command are usable;
performing said I/O command, if said storage resources requested by said I/O command are usable, otherwise rejecting said I/O command; and
sending an I/O result to said host ~~computer~~.

17. (Currently amended) The method of claim 16, wherein determining whether storage resources requested by said I/O command are usable comprises:
searching said device management store table to determine whether devices requested in said I/O command are usable.

18. (Currently amended) The method of claim 17, wherein determining whether storage resources requested by said I/O command are usable further comprises:
searching said I/O port management store table to determine whether I/O ports requested in said I/O command are usable and whether devices requested in said I/O command are accessible via I/O ports requested in said I/O command.

19. (Currently amended) A computer program product for configuring a host ~~computer~~ to access resources in a ~~remotable~~ storage subsystem, said host ~~computer~~, said ~~remotable~~ storage subsystem, and a center system ~~computer~~ interconnected by a communication network, said computer program product comprising:

code that receives at said host ~~computer~~ an I/O path setting request from said center system ~~computer~~, said I/O path setting request specifying a path to a resource comprising information about resources in said ~~removable~~ storage subsystem allocated for use by said host ~~computer~~;

code that requests an operating system resident in said host ~~computer~~ to update an I/O path setting ~~table~~ based upon said I/O path setting request;

code that receives an update result from said operating system;

code that sends a setting result to said center system ~~computer~~ based upon said update result; and

a computer readable storage medium for holding the codes.

20. (Currently amended) The computer program product of claim 19, further comprising:

code that receives at said center system ~~computer~~ an input of a demand for storage resources;

code that determines whether sufficient resources exist ~~in order~~ to meet said demand;

code that sends said demand for storage resources to said storage subsystem, if sufficient resources are determined to exist;

code that receives from said storage subsystem a management result, said management result indicating whether storage resources have been successfully allocated in accordance with said demand;

code that stores said management result;

code that determines whether said demand includes an I/O path setting request;

code that sends said I/O path setting request to said host ~~computer~~, if said demand includes an I/O path setting request;

code that receives said setting result from said host ~~computer~~; and

code that stores said setting result.

Please add the following claims:

21. (New) The storage management system of claim 1, wherein said storage resource includes said storage devices.

22. (New) A method comprising:
displaying graphically at least one representation of at least one host controller;
displaying graphically at least one representation of at least one storage device;
displaying graphically at least one representation of at least one port available for connection between said at least one host controller and said at least one storage device; and
enabling a user to specify the I/O path between a host controller, a port and a storage resource using the displayed graphical representations.

23. (New) The method of claim 22, wherein said enabling step includes updating a management table to set the I/O path specified by the user.

24. (New) The method of claim 22, wherein said enabling step includes instructing an operating system on the host computer to update an I/O path setting based upon the I/O path specified by the user.

25. (New) The method of claim 22, further comprising sending a result indicating whether the I/O path was successfully set to a center system.

26. (New) The method of claim 22, wherein said enabling step is associated with a storage on demand request.